

# Functional Fourier transformation and renormalization group transformation in bosonic field theory models

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## Abstract

We introduce the notion of a functional Fourier transformation in bosonic p-adic and Euclidean models of statistical physics. We prove a commutation relation between the Fourier transformation and the Wilson renormalization group transformation and discuss the similarity of renormalization group formalisms in p-adic and Euclidean models. © 2013 Pleiades Publishing, Ltd.

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## Keywords

bosonic model, Euclidean model, Fourier transformation, hierarchical lattice, p-adic model, renormalization group